

CLAIMS

What is claimed is:

1. A method of testing browser software in a computer environment, the method comprising the steps of:

generating a list of URLs (Universal Resource Location) using a web crawler;

automatically instructing a first browser program to load and render web pages according to the list of URLs;

detecting one or more errors in rendering of the first browser program the web pages; and

automatically storing information about the one or more errors.

2. The method of Claim 1, wherein the one or more errors include a crash of the first browser program in rendering one of the web pages.

3. The method of Claim 1, wherein the detecting of the one or more errors comprising the step of:

automatically instructing a second browser program to load and render the web pages; and

comparing a representation of rendering results of the first browser program

to a representation of rendering results of the second browser program.

4. The method of Claim 3, wherein one or more errors are detected when the representation of rendering results of the first browser program does not match the representation of rendering results of the second browser program.
5. The method of Claim 4, wherein the representation of rendering results of the first browser program comprises a screen image of a web page rendered by the first browser program.
6. The method of Claim 4, wherein the representation of rendering results of the first browser program comprises an internal representation of a web page as interpreted by the first browser program.
7. The method of Claim 6, the internal representation of the web page comprises attributes of the web page, including:
 - a background color;
 - a number of columns of a table; and
 - a number of rows of a table.

8. The method of Claim 1, further comprising the step of:
automatically restarting the first browser program after a crash of the first
browser program in rendering one of the web pages.
9. The method of Claim 1, further comprising the step of avoiding duplicated
visits to a same URL.
10. The method of Claim 1, wherein a number of URLs are removed from
the URLs reported by the web crawler to generate the list of URLs.
11. An apparatus of testing browser software in a computer environment,
comprising:

a module for generating a list of URLs (Universal Resource Location) using a
web crawler;

a module for automatically instructing a first browser program to load and
render web pages according to the list of URLs;

a module for detecting one or more errors in rendering of the first browser
program the web pages; and

a module for automatically storing information about the one or more errors.
12. The apparatus of Claim 11, wherein the one or more errors include a

crash of the first browser program in rendering one of the web pages.

13. The apparatus of Claim 11, wherein the module for the detecting of the one or more errors comprising:

a module for automatically instructing a second browser program to load and render the web pages; and

a module for comparing a representation of rendering results of the first browser program to a representation of rendering results of the second browser program.

14. The apparatus of Claim 11, wherein one or more errors are detected when the representation of rendering results of the first browser program does not match the representation of rendering results of the second browser program.

15. The apparatus of Claim 14, wherein the representation of rendering results of the first browser program comprises a screen image of a web page rendered by the first browser program.

16. The apparatus of Claim 14, wherein the representation of rendering results of the first browser program comprises an internal representation of a web page as interpreted by the first browser program.

17. The apparatus of Claim 16, the internal representation of the web

page comprises attributes of the web page, including:

a background color;

a number of columns of a table; and

a number of rows of a table.

18. The apparatus of Claim 11, further comprising:

a module for automatically restarting the first browser program after a crash of the first browser program in rendering one of the web pages.

19. The apparatus of Claim 11, further comprising a module for avoiding duplicated visits to a same URL.

20. The apparatus of Claim 11, wherein a number of URLs are removed from the URLs reported by the web crawler to generate the list of URLs.

21. A program storage medium readable by a computer, tangibly embodying a program of instructions executable by the computer to perform a method for testing browser software in a computer environment, the method comprising the steps of:

generating a list of URLs (Universal Resource Location) using a web

crawler;

automatically instructing a first browser program to load and render web pages according to the list of URLs;

detecting one or more errors in rendering of the first browser program the web pages; and

automatically storing information about the one or more errors.

22. The medium of Claim 21, wherein the one or more errors include a crash of the first browser program in rendering one of the web pages.

23. The medium of Claim 21, wherein the method of detecting of the one or more errors comprising the step of:

automatically instructing a second browser program to load and render the web pages; and

comparing a representation of rendering results of the first browser program to a representation of rendering results of the second browser program.

24. The medium of Claim 23, wherein one or more errors are detected when the representation of rendering results of the first browser program does not match the representation of rendering results of the second

browser program.

25. The medium of Claim 24, wherein the representation of rendering results of the first browser program comprises a screen image of a web page rendered by the first browser program.

26. The medium of Claim 24, wherein the representation of rendering results of the first browser program comprises an internal representation of a web page as interpreted by the first browser program.

27. The medium of Claim 26, the internal representation of the web page comprises attributes of the web page, including:

- a background color;
- a number of columns of a table; and
- a number of rows of a table.

28. The medium of Claim 21, the method further comprising the step of:
automatically restarting the first browser program after a crash of the first browser program in rendering one of the web pages.

29. The medium of Claim 21, the method further comprising the step of avoiding duplicated visits to a same URL.
30. The medium of Claim 21, wherein a number of URLs are removed from the URLs reported by the web crawler to generate the list of URLs.